





ORDER NO. TRT1021

SURFACE-MOUNT TUNE-UP WOOFER SYSTEM

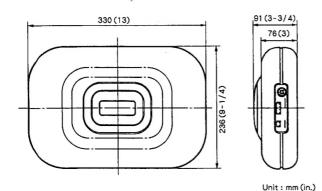
1. SPECIFICATIONS

· Speaker specifications

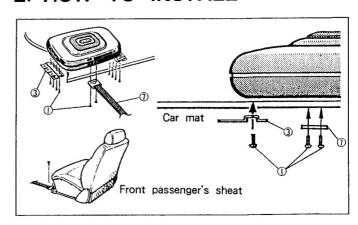
Size ····· φ 160mm (6-1/2" Dia.) Injection-molded polypropylene cone High compliance, rolled edge Heat-resistant voice coil Strontium magnet: 380g (13.5 oz) · Amplifire Max. power output ······80W Input level (DIN) $\cdots 15mV + 15mV / 47k\Omega$ (at GAIN Max.) (Speaker line) $\cdots 1.5V + 1.5V/22k\Omega$ (at GAIN Max.) Power source......DC14.4V (10.8 - 15.6V allowable)

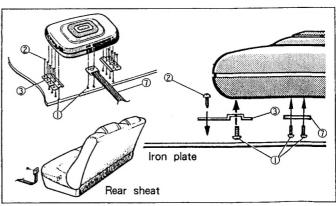
Grounding...... Negative ground Max. current consumption ···········7 A Speaker systemSealed type · Cabinet material ·············High density compound resin Aluminum die cast • Size····· 330mm (W) × 236mm (D) × 91mm (H)

• Weight (including accessory parts)4.2kg (9lb 4oZ) • Gross weight (including packaging) 4.6kg (10 lb 2 oz)



2. HOW TO INSTALL





PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan

PIONEER ELECTRONICS SERVICE INC. P.O. Box 1760, Long Beach, California 90801 U.S.A.

PIONEER ELECTRONICS OF CANADA, INC. 505 Cochrane Drive, Markham, Ontario L3R 8E3 Canada

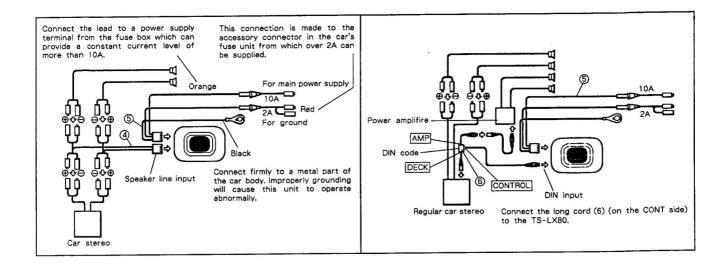
PIONEER ELECTRONIC [EUROPE] N.V. Keetberglaan 1, 2740 Beveren, Belgium

PIONEER ELECTRONICS AUSTRALIA PTY. LTD. 178-184 Boundary Road, Braeside, Victoria 3195, Australia TEL: [03] 580-9911

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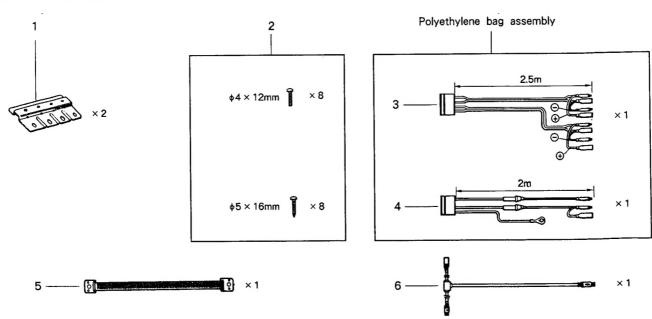
3. CONNECTIONS



4. PARTS LIST OF PACKING

<u>No.</u>	Description	Part No.	Remarks
1 2 3 4 5	Holder Parts bag Cord Cord Belt	TNA1088 TEA1249 TDC1309 TDC1421 TNA1203	× 2 × 1 Screws × 1 × 1
6	DIN cord Styrofoam protector Packing case	TDE1004 TEC1355 THF1583	×1 One pair ×1

• Including parts



5. EXPLODED VIEWS AND PARTS LIST

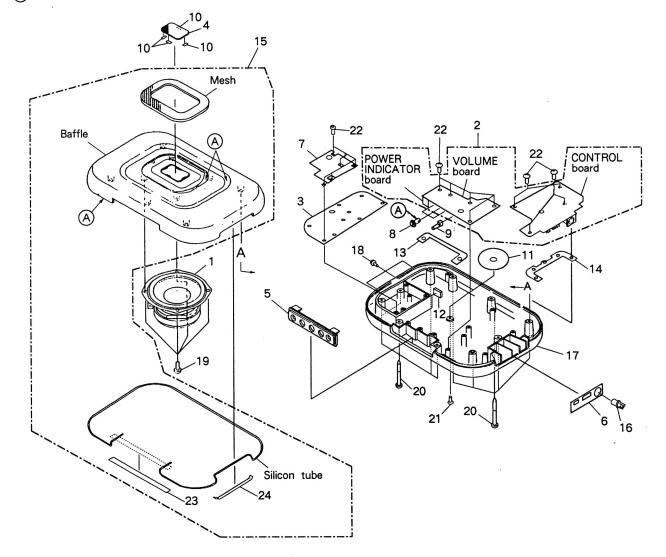
NOTES:

- Parts without part number cannot be supplied.
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "•" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

Parts List

No.	Description	Part No.	Remark	No.	Description	Part No.	Remark
1 ② 2 ③ 3	Woofer Control amp unit Power amp unit	16-437AZ TWG1002 TWH1008	×1 ×1 ×1	12 13 14	Insulator Packing Packing Baffle board assembly	TNM1005 TEC1351 TEC1352 TXK1221	×1 ×1 ×1 ×1
4 5	Mesh Front panel	TLL1206 TNS1007	×1 ×1	15 16	Short cap	CNV1308	×1
6 7 8 9 10 11	Side panel Shield plate Volume knob Switch knob Adhesive Cushion	TNS1006 TNA1185 TAA1003 TAA1004 TEB1043 TED1044	×1 ×1 ×3 ×1 ×4 ×1	17 18 19 20 21 22 23	Cabinet Screw Screw Screw Screw Screw Packing	TLM1148 BMZ30P100FZK BPZ40P100FMC BPZ40P160FMC BSZ40P120FZK BBZ30P100FMC TEC1353	×1 ×3 ×4 ×10 ×1 ×16 ×1
					Packing	TEC1354	$\stackrel{\wedge}{\times} 1$

(A): Adhesion portion



6. ELECTRICAL PARTS LIST

- NOTES:

 Parts without part number cannot be supplied.
- Parts marked by "©" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.
- Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by

700	DD1 / ADC EDE T
560 Ω→56 × 10' →561····································	RD1/4P3[0][1]3
$560 \Omega \rightarrow 56 \times 10^{1} \rightarrow 561$	RD1/4PS[4][7][3]J
ALC ODE	PNOUDEL
0.5 Ω→ 0R5 ······	UNSU (DIVIDIV
1.0 \(0.10 \)	RS1P 0 1 0 K

Ex.2 When there are 3 effective digits (such as in high precision film resistors).

Part No.

SLH-34VC5

Mark Symbol & Description

D2 (POWER)

	● CONTROL AMP UNIT (TWG1002)		CONTROL Board			
P. C. Boards		SEMI	CONDUCTORS			
Mark Symbol & Description	Part No.	Mark	Symbol & Description	Part No.		
VOLUME board POWER INDICATOR bo CONTROL board	ard		IC1 — IC4,IC8 Q1,Q2,Q6 Q3,Q4 Q5 D1	NJM2068S 2SC2458 2SA1048 2SC2060 ERA15-02VH		
VOLUME Board			D3	RD9R1EB2		
SEMICONDUCTORS			D4 - D10	1SS176		
Mark Symbol & Description	Part No.	COIL				
IC5 — IC7	NJM2068S		Symbol & Description	Part No.		
SWITCH			L1 (0.1mH)	CZT2705		
Mark Symbol & Description	Part No.	CAPACITORS				
SW1 (NOR/REV)	CSG-207		Symbol & Description	Part No.		
CAPACITORS			C1 - C4	CEA100M50L2		
Mark Symbol & Description	Part No.		C5,C6,C11,C12 C7 – C10	CCCSL101J50 CEA2R2M50NPLI		
C15 C16,C26 C27,C28	CEA4R7M50L2 CCCSL100J50 CQMA332K50		C13,C14 C19,C21	CEA100M50L2 CQMA123K50		
C34,C35	CEA101M10L2		C20,C22	CQMA562K50		
RESISTORS			C23,C25 C24	CEA220M50L2 CEA010M50L2		
Mark Symbol & Description	Part No.		C29,C30	CCCSL100J50		
VR1.VR2 Volume (20)			C31,C33 C32	CEA331M16L2 CEA101M10L2		
VR3 Volume (2k)	Ω) TSH1003			02111011111022		
Other resistors	RD1/4PS□□□JL		STORS			
		Mark	Symbol & Description	Part No.		
POWER INDICATOR BO	ard		All resistors	RD1/4PS□□□JL		
	ai u	OTH	ERS			
SEMICONDUCTOR		Mark	Symbol & Description	Part No.		

P1

Connector (4P) Connector (DIN)

Connector (4P)

P3,P4 Connector (3P)

Cord (8P) Cord (2P) TKS1015

TKS1019

TKS1023

TKS1024 TDC1420

TDC1422

6. ELECTRICAL PARTS LIST

NOTES:

vailable.

nark

• Parts without part number cannot be supplied.

● Parts marked by "●" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable. ● The A mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

 When ordering resistors, first convert resistance values into code form as shown in the following examples.
 Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

				ر ال			
© CONTROL AMP UNIT (TWG1002)			CONTROL Board				
P. C. Boards			SEMICONDUCTORS				
Mark	Symbol & Description	Part No.	Mark	Symbo	ol & Description	Part No.	
	VOLUME board POWER INDICATOR board CONTROL board			IC1 – Q1,Q2 Q3,Q4 Q5 D1		NJM2068S 2SC2458 2SA1048 2SC2060 ERA15-02VH	
VOL	JME Board						
SEMI	CONDUCTORS			D3 D4 – D10		RD9R1EB2 1SS176	
Mark	Symbol & Description	Part No.	COIL				
	IC5 – IC7	NJM2068S	Mark	Symbo	ol & Description	Part No.	
SWIT	СН			L1	(0.1mH)	CZT2705	
Mark	Symbol & Description	Part No.	CADA	ACITO	ne		
	SW1 (NOR/REV)	CSG-207			NS ol & Description	Part No.	
CAPA	CITORS	·········		C1 – C4		CEA100M50L2	
Mark	Symbol & Description	Part No.			C11,C12	CCCSL101J50	
	C15 C16,C26 C27,C28 C34,C35	CEA4R7M50L2 CCCSL100J50 CQMA332K50 CEA101M10L2	C7 - C10 C13,C14 C19,C21 C20,C22		14	CEA2R2M50NPLL CEA100M50L2 CQMA123K50 CQMA562K50	
RESISTORS			C23,C25 C24		CEA220M50L2 CEA010M50L2		
	Symbol & Description	Part No.		C29,C30		CCCSL100J50	
	$\begin{array}{ccc} VR1,VR2 & Volume~(20k\Omega) \\ VR3 & Volume~(2k\Omega) \end{array}$	TSH1004 TSH1003		C31,C3 C32	33	CEA331M16L2 CEA101M10L2	
	Other resistors	RD1/4PS□□□JL		STORS			
			<u>Mark</u>		ol & Description	Part No.	
POWER INDICATOR Board				All re	sistors	RD1/4PS□□□JL	
SEMICONDUCTOR		OTHERS					
	Symbol & Description	Part No.	Mark	Symbo	l & Description	Part No.	
IVIAIR	D2 (POWER)	SLH-34VC5		P2 P1 P3,P4 P5	Connector (4P) Connector (DIN) Connector (3P) Connector (4P)	TKS1015 TKS1019 TKS1023 TKS1024	
					Cord (8P) Cord (2P)	TDC1420 TDC1422	

POWER AMP UNIT (TWH1008)

Mark	Symbol & Description	Part No.
	IC201 IC202	UPC1225H
	Q201	HD7402P
	Q202	2SC3422 2SD718
	Q203	
	Q203	2SB688
	Q204,Q205	2SC2458
	Q206	2SA1048
	Q207	2SC2655
	Q208	2SA965
	Q209,Q210	2SC4131
	Q211 - Q213	2SC2001
	D201,D220,D221	1S1886
	D203,D204,D206,D207,D212,D213,	1SS176
	D216 - D219 D205	RD9R1ES
	7000	
	D209	03P2M
	D210	RD5R6JS
	D211	RD6R8JS
	D214 D215	FMG22S
	מושע	FMG22R
RELA	Υ	
<u>Mark</u>	Symbol & Description	Part No.
	RL201 Relay	TSR1002
COILS	S AND TRANSFORMERS	
	Symbol & Description	Part No.
	L201	CTF-167
	L202,L203 (1mH)	CZT2705
Δ	T2	
<u> </u>	T1	CTH-061
<u> </u>	11	CTH-076
CAPA	CITORS	
Mark	.0110110	
	. Symbol & Description	Part No.
	Symbol & Description TH201	TCX-001
	Symbol & Description TH201 C201	TCX-001 CEA4R7M16NPLI
	Symbol & Description TH201 C201 C202,C223,C224	TCX-001 CEA4R7M16NPLI CQMA473K50
	Symbol & Description TH201 C201 C202,C223,C224 C203	TCX-001 CEA4R7M16NPLI CQMA473K50 CEA221M10L2
- South	Symbol & Description TH201 C201 C202,C223,C224 C203 C204	TCX-001 CEA4R7M16NPLI CQMA473K50
	Symbol & Description TH201 C201 C202,C223,C224 C203 C204 C205	TCX-001 CEA4R7M16NPLI CQMA473K50 CEA221M10L2 CCCSL330J50 CQMA683K50
	Symbol & Description TH201 C201 C202,C223,C224 C203 C204 C205 C207 (220μ/6,3)	TCX-001 CEA4R7M16NPLI CQMA473K50 CEA221M10L2 CCCSL330J50
	Symbol & Description TH201 C201 C202,C223,C224 C203 C204 C205	TCX-001 CEA4R7M16NPLI CQMA473K50 CEA221M10L2 CCCSL330J50 CQMA683K50
	Symbol & Description TH201 C201 C202,C223,C224 C203 C204 C205 C207 C207 C20μ/6,3) C209 – C211 C212,C219,C237	TCX-001 CEA4R7M16NPLI CQMA473K50 CEA221M10L2 CCCSL330J50 CQMA683K50 TCH1101
THE IX	Symbol & Description TH201 C201 C202,C223,C224 C203 C204 C205 C207 (220 μ / 6,3) C209 – C211	TCX-001 CEA4R7M16NPLI CQMA473K50 CEA221M10L2 CCCSL330J50 CQMA683K50 TCH1101 CEA101M10L2
THE IX	Symbol & Description TH201 C201 C202,C223,C224 C203 C204 C205 C207 C207 C20μ/6,3) C209 – C211 C212,C219,C237	TCX-001 CEA4R7M16NPLI CQMA473K50 CEA221M10L2 CCCSL330J50 CQMA683K50 TCH1101 CEA101M10L2 CEA331M16L2
	Symbol & Description TH201 C201 C202,C223,C224 C203 C204 C205 C207 (220 μ / 6,3) C209 – C211 C212,C219,C237 C213,C214,C218,C220,C238,C240,C242 C215,C216,C232,C233	TCX-001 CEA4R7M16NPLI CQMA473K50 CEA221M10L2 CCCSL330J50 CQMA683K50 TCH1101 CEA101M10L2 CEA331M16L2
	$\begin{array}{lll} \textbf{Symbol \& Description} \\ \hline \text{TH201} \\ \text{C202}, \text{C223,C224} \\ \text{C203} \\ \text{C204} \\ \hline \\ \hline \\ \text{C207} & (220\mu/6,3) \\ \text{C209} - \text{C211} \\ \text{C212,C219,C237} \\ \text{C213,C214,C218,C220,C238,C240,} \\ \text{C242} \\ \hline \\ \text{C215,C216,C232,C233} \\ & (2200\mu/35) \\ \hline \end{array}$	TCX-001 CEA4R7M16NPLI CQMA473K50 CEA221M10L2 CCCSL330J50 CQMA683K50 TCH1101 CEA101M10L2 CEA331M16L2 CQMA104K50 TCH1099
	$\begin{array}{c} \textbf{Symbol \& Description} \\ \textbf{TH201} \\ \textbf{C201} \\ \textbf{C202,C223,C224} \\ \textbf{C203} \\ \textbf{C204} \\ \\ \textbf{C205} \\ \textbf{C207} \\ \textbf{(220}\mu/6,3) \\ \textbf{C209} - \textbf{C211} \\ \textbf{C212,C219,C237} \\ \textbf{C213,C214,C218,C220,C238,C240,C242} \\ \textbf{C215,C216,C232,C233} \\ \textbf{(2200}\mu/35) \\ \textbf{C217} \\ \end{array}$	TCX-001 CEA4R7M16NPLI CQMA473K50 CEA221M10L2 CCCSL330J50 CQMA683K50 TCH1101 CEA101M10L2 CEA331M16L2 CQMA104K50 TCH1099 CEA100M16LL
	$\begin{array}{lll} \textbf{Symbol \& Description} \\ \hline \text{TH201} \\ \text{C202}, \text{C223,C224} \\ \text{C203} \\ \text{C204} \\ \hline \\ \hline \\ \text{C207} & (220\mu/6,3) \\ \text{C209} - \text{C211} \\ \text{C212,C219,C237} \\ \text{C213,C214,C218,C220,C238,C240,} \\ \text{C242} \\ \hline \\ \text{C215,C216,C232,C233} \\ & (2200\mu/35) \\ \hline \end{array}$	TCX-001 CEA4R7M16NPLI CQMA473K50 CEA221M10L2 CCCSL330J50 CQMA683K50 TCH1101 CEA101M10L2 CEA331M16L2 CQMA104K50 TCH1099
T. C.	$\begin{array}{c} \textbf{Symbol \& Description} \\ \textbf{TH201} \\ \textbf{C201} \\ \textbf{C202,C223,C224} \\ \textbf{C203} \\ \textbf{C204} \\ \\ \textbf{C205} \\ \textbf{C207} (220\mu/6,3) \\ \textbf{C209} - \textbf{C211} \\ \textbf{C212,C219,C237} \\ \textbf{C213,C214,C218,C220,C238,C240,C242} \\ \textbf{C215,C216,C232,C233} \\ \textbf{(2200}\mu/35) \\ \textbf{C217} \\ \textbf{C221} \\ \textbf{C222} \\ \end{array}$	TCX-001 CEA4R7M16NPLI CQMA473K50 CEA221M10L2 CCCSL330J50 CQMA683K50 TCH1101 CEA101M10L2 CEA331M16L2 CQMA104K50 TCH1099 CEA100M16LL CQMA102K50 CQMA103K50
	Symbol & Description TH201 C201 C202,C223,C224 C203 C204 C205 C207 (220 μ /6,3) C209 – C211 C212,C219,C237 C213,C214,C218,C220,C238,C240,C242 C215,C216,C232,C233 (2200 μ /35) C217 C221 C222 C225,C228	TCX-001 CEA4R7M16NPLI CQMA473K50 CEA221M10L2 CCCSL330J50 CQMA683K50 TCH1101 CEA101M10L2 CEA331M16L2 CQMA104K50 TCH1099 CEA100M16LL CQMA102K50 CQMA103K50 CQMA332K50
	Symbol & Description TH201 C201 C202,C223,C224 C203 C204 C205 C207 (220 μ /6,3) C209 – C211 C212,C219,C237 C213,C214,C218,C220,C238,C240,C242 C215,C216,C232,C233 (2200 μ /35) C217 C221 C222 C225,C228 C226,C227	TCX-001 CEA4R7M16NPLI CQMA473K50 CEA221M10L2 CCCSL330J50 CQMA683K50 TCH1101 CEA101M10L2 CEA331M16L2 CQMA104K50 TCH1099 CEA100M16LL CQMA102K50 CQMA103K50 CQMA332K50 CQMA123K50
	Symbol & Description TH201 C201 C202,C223,C224 C203 C204 C205 C207 (220 μ /6,3) C209 - C211 C212,C219,C237 C213,C214,C218,C220,C238,C240,C242 C215,C216,C232,C233 (2200 μ /35) C217 C221 C222 C225,C228 C226,C227 C229,C230,C231	TCX-001 CEA4R7M16NPLI CQMA473K50 CEA221M10L2 CCCSL330J50 CQMA683K50 TCH1101 CEA101M10L2 CEA331M16L2 CQMA104K50 TCH1099 CEA100M16LL CQMA102K50 CQMA103K50 CQMA332K50 CQMA123K50 CCMA123K50 CEA102M16L2
T. C.	Symbol & Description TH201 C201 C202,C223,C224 C203 C204 C205 C207 (220 μ /6,3) C209 – C211 C212,C219,C237 C213,C214,C218,C220,C238,C240,C242 C215,C216,C232,C233 (2200 μ /35) C217 C221 C222 C225,C228 C226,C227	TCX-001 CEA4R7M16NPLI CQMA473K50 CEA221M10L2 CCCSL330J50 CQMA683K50 TCH1101 CEA101M10L2 CEA331M16L2 CQMA104K50 TCH1099 CEA100M16LL CQMA102K50 CQMA103K50 CQMA332K50 CQMA123K50

CQMA474K50

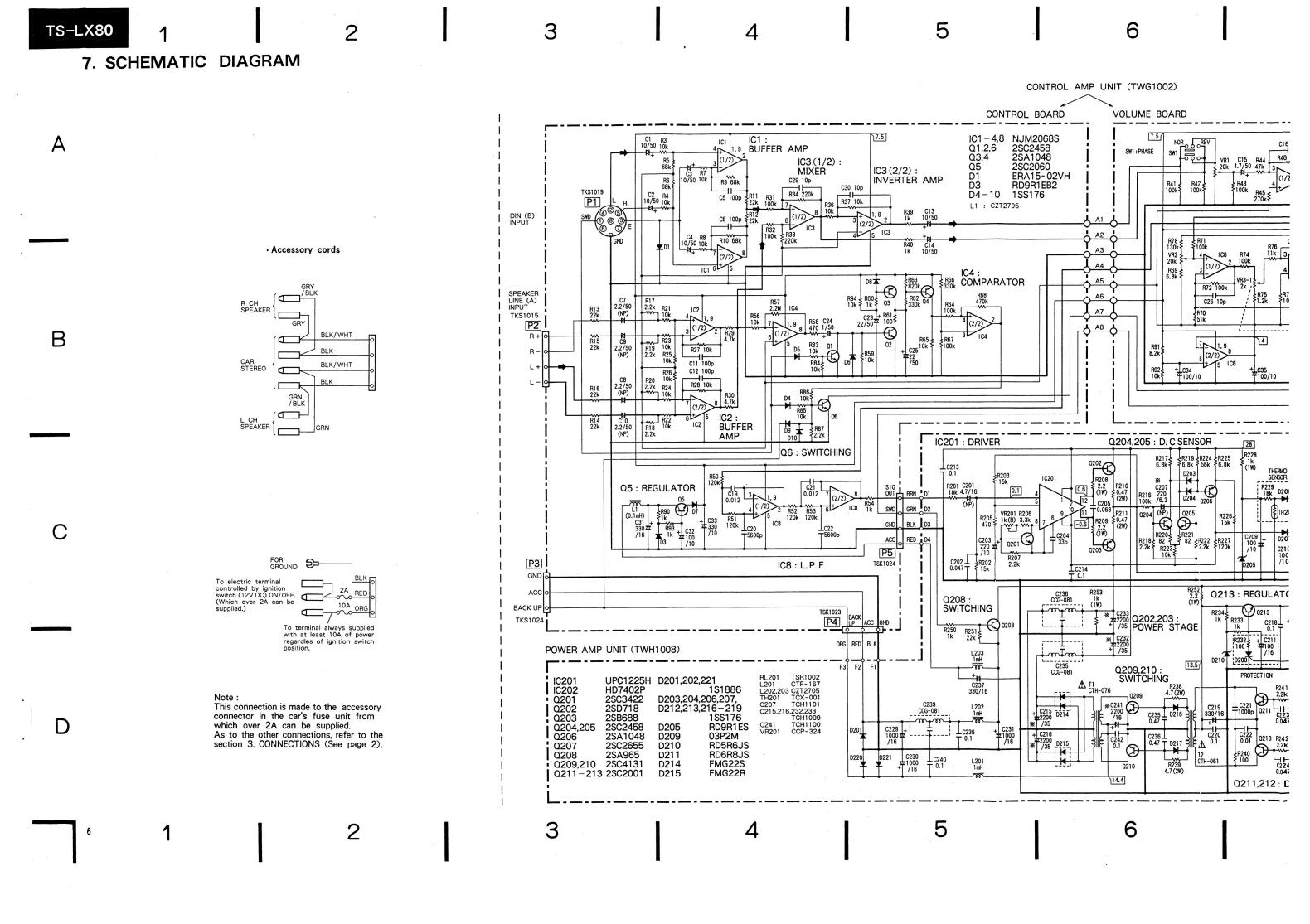
C235,C236

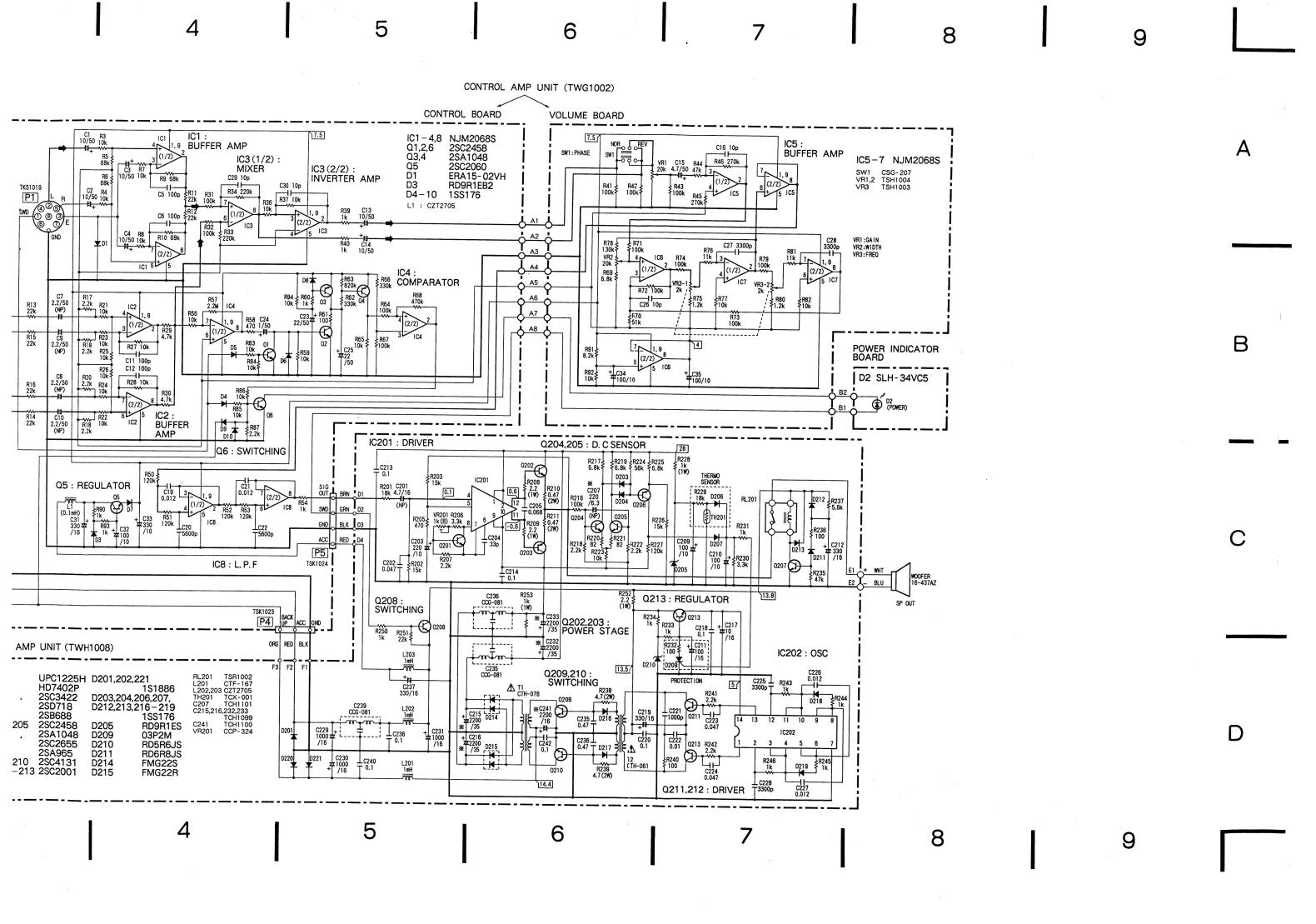
RESISTORS

Mark	Symbol & Description	Part No.
	VR201 Semi-fixed (1kΩ) R208,R209,R228,R252 R210,R211,R238,R239	CCP-324 RS1V □□□ JL
	R253	RS2P 🗆 🗆 JL
	Other resistors	$RS1P \square \square \square JL$ $RD1/4PS \square \square \square JL$
	Other resistors	17D1/4F3 [[[[]]]

OTHERS

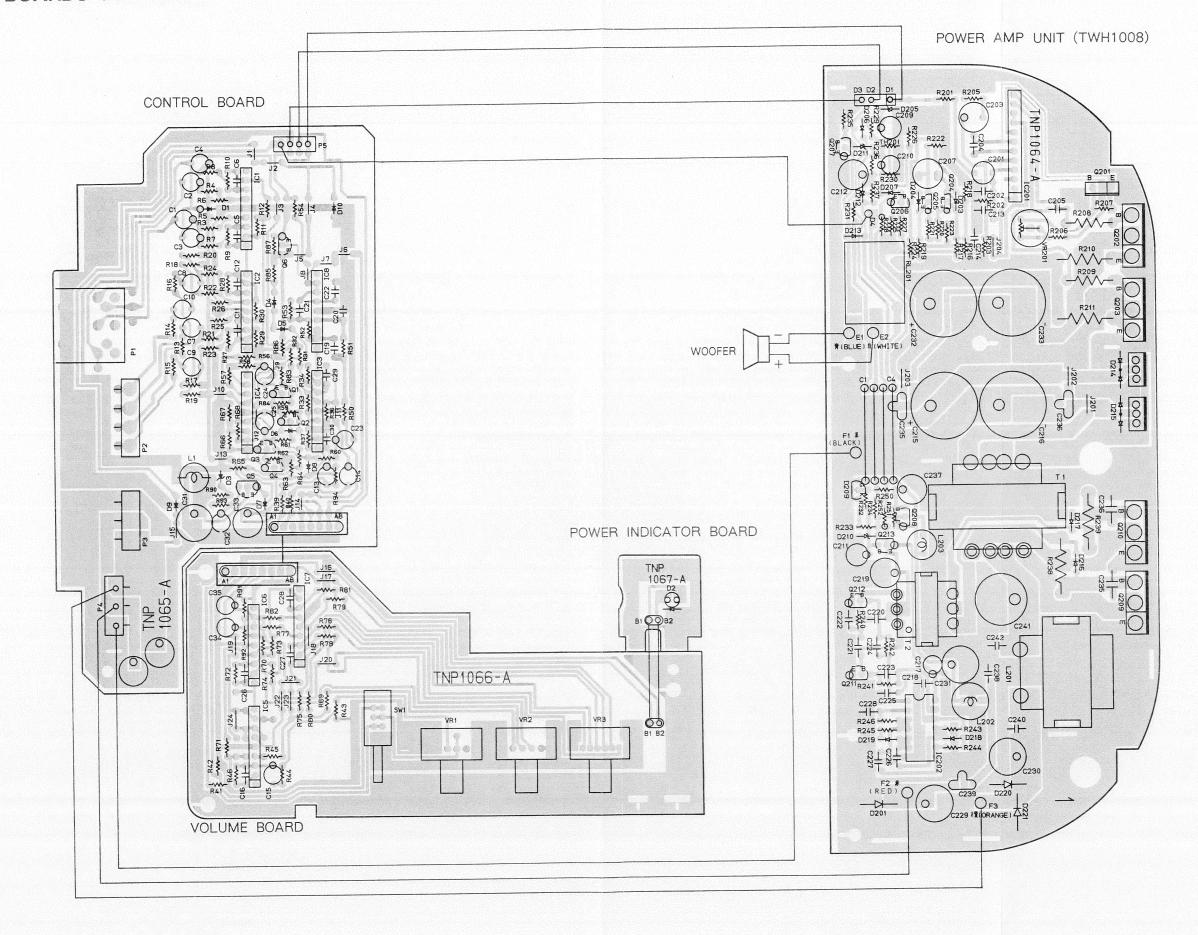
OTTLENO					
Mark	Symbol & Description	Part No.			
	Bushing Bracket Insulator Insulator Cord	TEB1130 TNA1187 TNM1003 TNM1004 TDC1415			
	Cord Cord Cord	TDC1416 TDC1263 TDC1419			





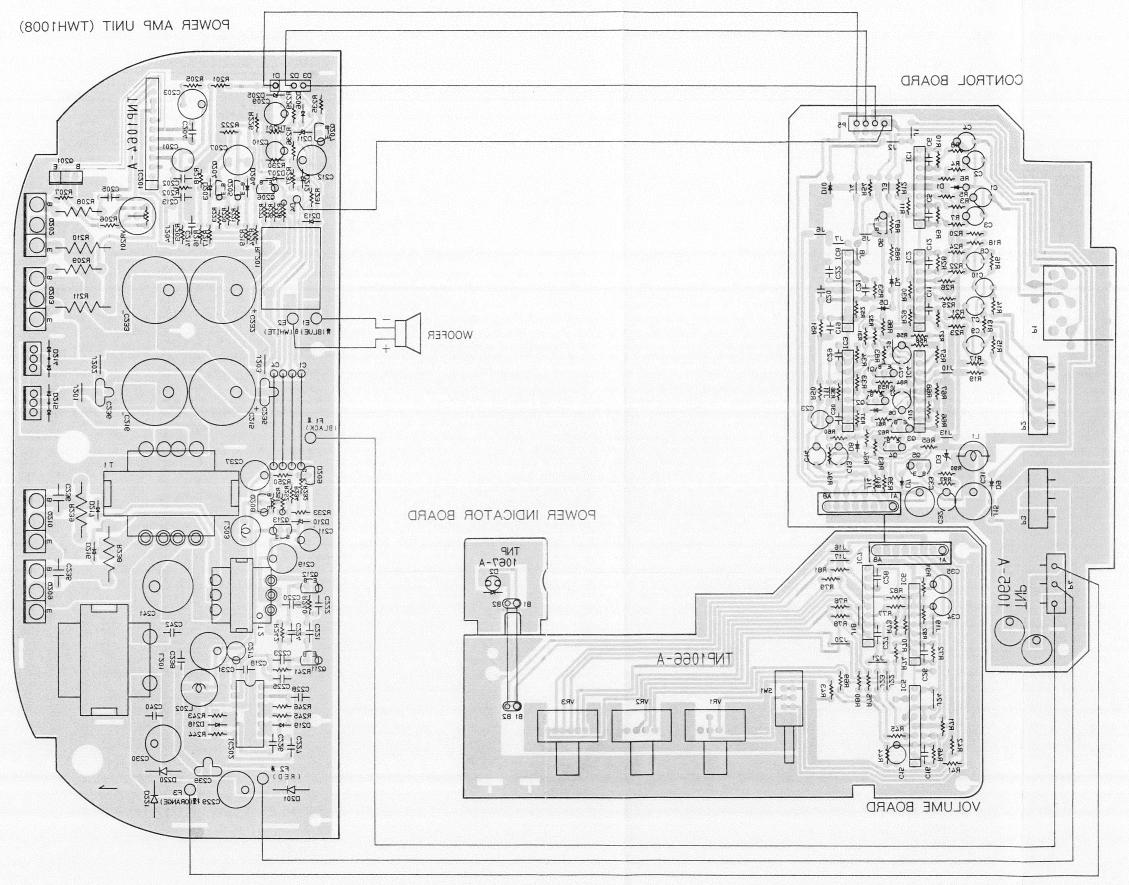
8. P. C. BOARDS PATTERN

В



8

* O



This P.C.B. connection diagram is viewed from the foil side.